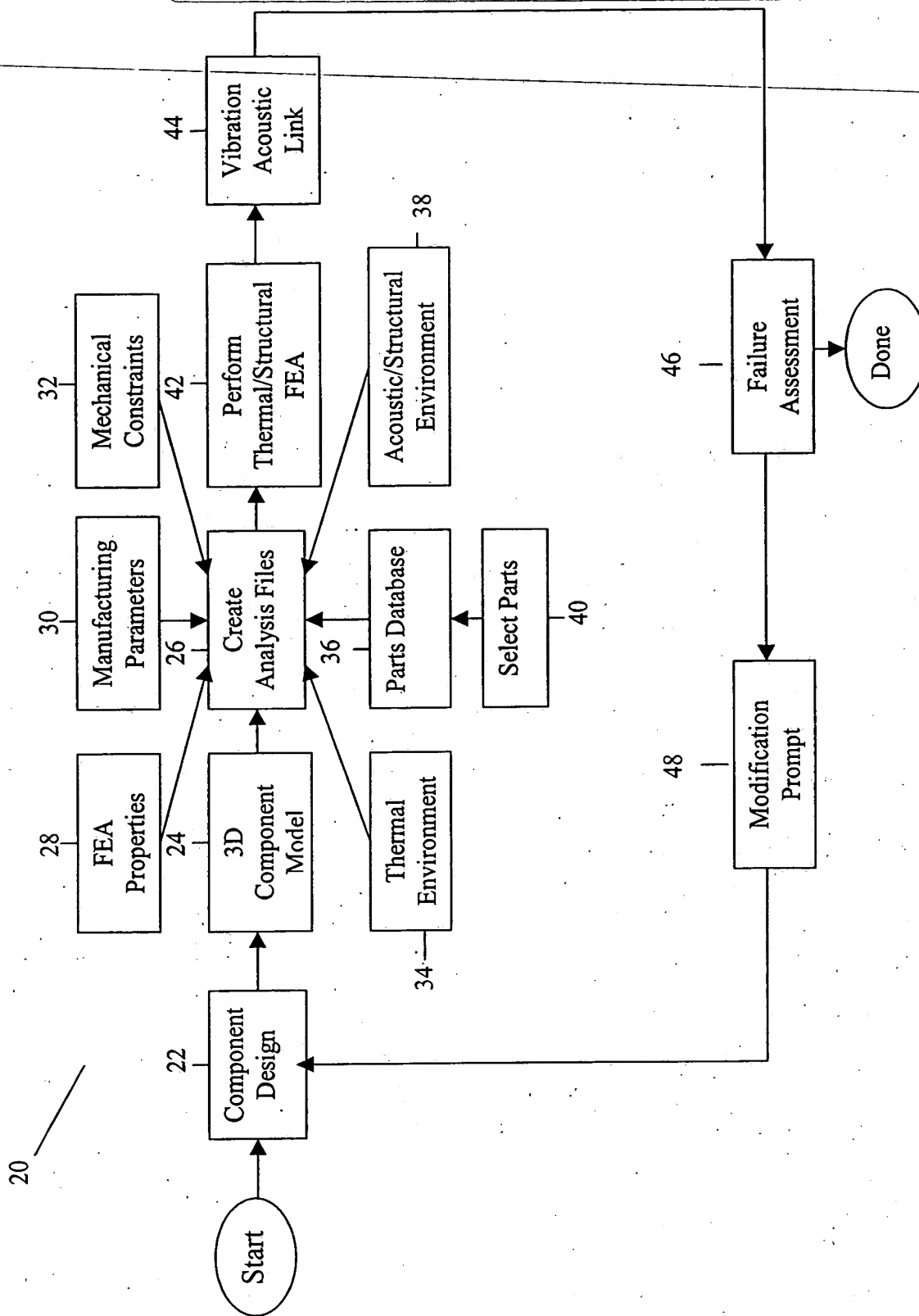


FIG. 1.



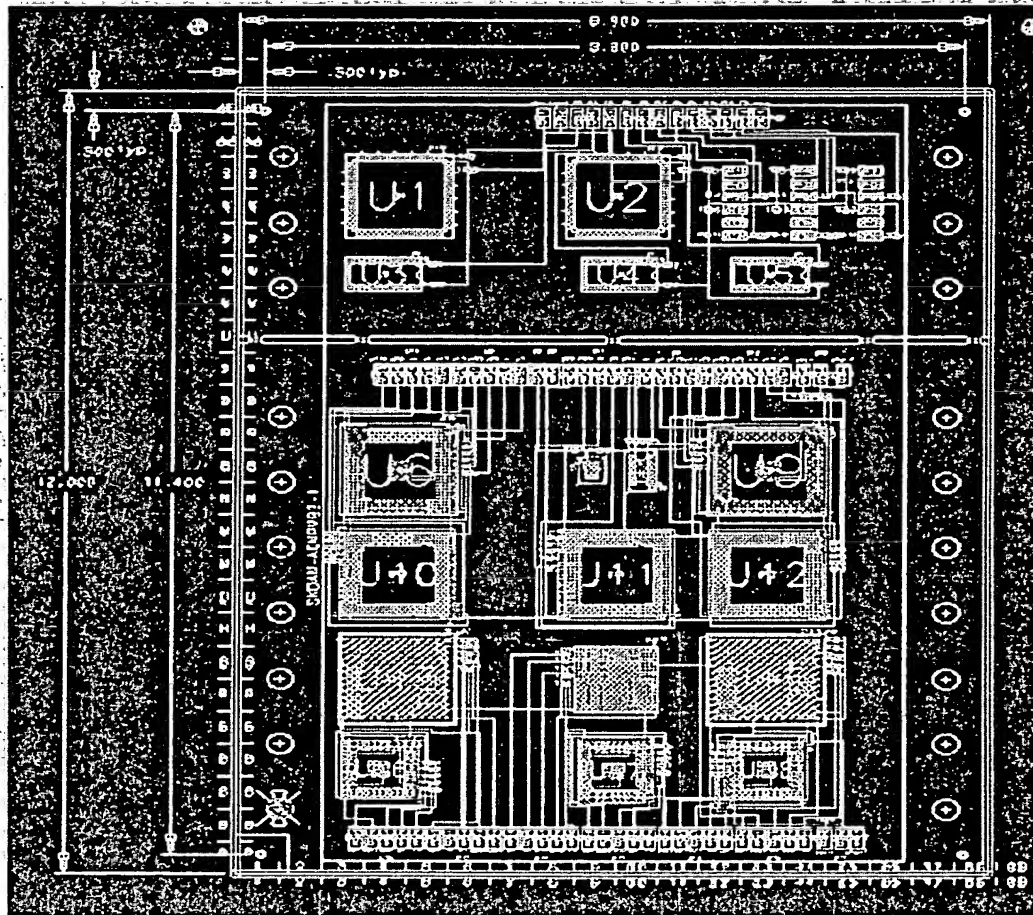
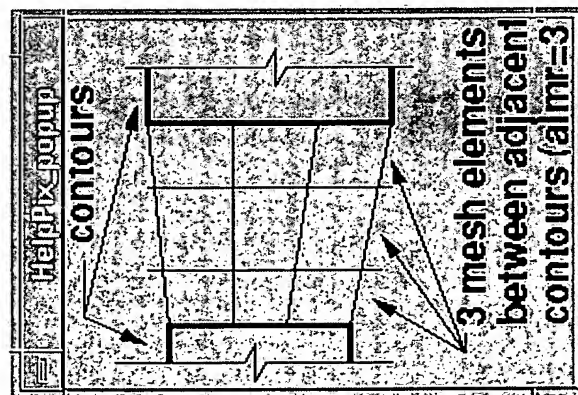


FIG. 2.

20220416:4001

Figure 3



Help for selected field

Mentor Files

Part Geometry ☒ Show Help ☒ Mesh Properties ☒ Material Properties

Target Mesh Size (ms) Minimum Component Area (ma)

☒ Use Bounding Boxes Instead of Actual Geometry (ue)

Mesh Geometry ☒ Scale Properties to Target Mesh Size

Number of Subdivisions of Line Segments (lmr)

Number of Mesh Subdivisions between Parallel Lines (almr)

Maximum line segment length (fc)

Chamfer Threshold (dcc)

Minimum Vertices for Contours (polygons) (sc)

Minimum Chord Length for Arc Idealization (sc)

Parallel Line Discrimination Distance (plmc)

Point Discrimination Distance - COVER (scic)

Point Discrimination Distance - PWB (dsic)

Mentor Resolution (e)

Adjacent contours within a distance of "almr" will be considered when constructing the mesh for a contour.

Cancel Apply Reset to Defaults

FIG. 4.

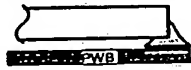
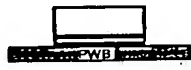
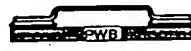


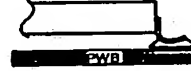
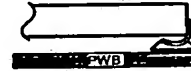

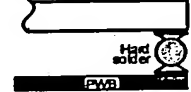
	Durability Module	Description	Configuration
	CCC	Leadless chip component	
54 —	DIO	Planar-diode package	
52 —	IND	Inductor feedthrough foil	
58 {	Hybrid-GW	Gull wing	
	Hybrid-SGW	Spider gull wing	
56 {	L-lead	L-leaded component	
	J-lead	J-leaded component	
	PTH	Plated-through-hole component	
59 —	PBGA	Plastic ball grid arrays	

FIG. 4 is a table showing various Durability Modules and their configurations.

20250710 11:06:40

Durability Part Number Table					
Part Number	Package Name	Lead Style Name	Lead Material Name		
172908-00K	313 BGA Package 100mil pitch				
173332-00P	T11-TSOP-54 10x22mm HYBRID 002K		CU		
173334-11V	PQFP 208 pin HYBRID 0024		CU		
173370-00L	360 CBGA Package				
173446-00K	388 BGA Package				
280-10020-101	280-10020-101				
280-10025-101	280-10025-101				
280-10025-102	280-10025-102				
280-10025-103	280-10025-103				
280-10025-104	280-10025-104				

BGA Package Table						
Package Name	Substrate	Length	Width	Balls	Thrm Balls	Y
144 BGA Package	U-512	144	144	0	0	0
144 BGA Package	U-512	144	144	0	0	0
313 BGA Package 100mil pitch	1.380	169	1.380	0	0	0
313 BGA Package 50mil pitch	1.380	625	1.380	0	0	0
324 BGA Package	0.906	324	0.906	6	6	6
352 BGA Package	1.378	352	1.378	0	0	0
360 CBGA Package	0.980	361	0.980	0	0	0
388 BGA Package	1.378	388	1.378	6	6	6
Dummy BGA Package	0.512	144	0.512	12	12	12
1741pbga-225f-025	1.180	225	1.180	0	0	0

FIG. 5.

202120 11 16 2007

Durability Part Number Table									
Part Number	Package Name	Lead Style Name	Lead Style Name	Lead Material Name					
172908-00K	313 BGA Package 100mil pitch								
173332-00P	111-TSOP-50 10x22mm	HYBRID-002k		CU					
173334-11J	pgfp-208 1e	HYBRID-002a		CU					
173370-00L	36U CPGA Package								
173446-00K	388 BGA Package								
280-10020-101	280-10020-101								
280-10025-101	280-10025-101								
280-10025-102	280-10025-102								
280-10025-103	280-10025-103								
280-10025-104	280-10025-104								
280-10025-105	280-10025-105								

Lead Geometry Table									
Lead Style Name	S1	S2	S3	RHO	R1P	R2	FE	HA	D
900-146954f1g1	U-000	U-000	U-000	U-000	U-000	U-000	U-000	U-000	U-000
HYBRID-001	0-000	0-030	0-000	0-000	0-000	0-013	0-000	0-047	0-014
HYBRID-002	0-005	0-080	0-008	0-000	0-750	0-550	0-008	0-008	0-050
HYBRID-002a	0-020	0-030	0-035	0-000	0-005	0-005	0-105	0-105	0-026
HYBRID-002b	0-025	0-030	0-055	0-000	0-005	0-005	0-000	0-057	0-007
HYBRID-002c	0-010	0-030	0-056	0-000	0-003	0-005	0-000	0-035	0-006
HYBRID-002d	0-000	0-006	0-021	0-000	0-005	0-005	0-000	0-040	0-004
HYBRID-002e	0-000	0-005	0-021	0-000	0-001	0-001	0-000	0-050	0-011
HYBRID-002f	0-016	0-013	0-051	0-000	0-005	0-005	0-000	0-072	0-009
HYBRID-002g	0-037	0-012	0-071	0-000	0-006	0-006	0-000	0-063	0-005
HYBRID-002h	0-008	0-019	0-041	0-000	0-005	0-005	0-000	0-029	0-017
HYBRID-002i	0-007	0-026	0-052	0-000	0-005	0-005	0-000	0-076	0-009
HYBRID-002j	0-000	0-040	0-060	0-000	0-005	0-005	0-000	0-030	0-010
HYBRID-002k	0-000	0-040	0-060	0-000	0-005	0-005	0-000	0-050	0-014
HYBRID-003	0-001	0-020	0-031	0-000	0-005	0-005	0-000	0-028	0-006
HYBRID-004	0-030	0-040	0-120	0-000	0-020	0-020	0-050	0-050	0-010
HYBRID-005	0-030	0-040	0-120	0-000	0-020	0-020	0-060	0-060	0-010
HYBRID-006	0-030	0-040	0-150	0-000	0-020	0-020	0-040	0-040	0-010
HYBRID-007	0-030	0-060	0-140	0-000	0-020	0-020	0-200	0-200	0-009

FIG. 6.

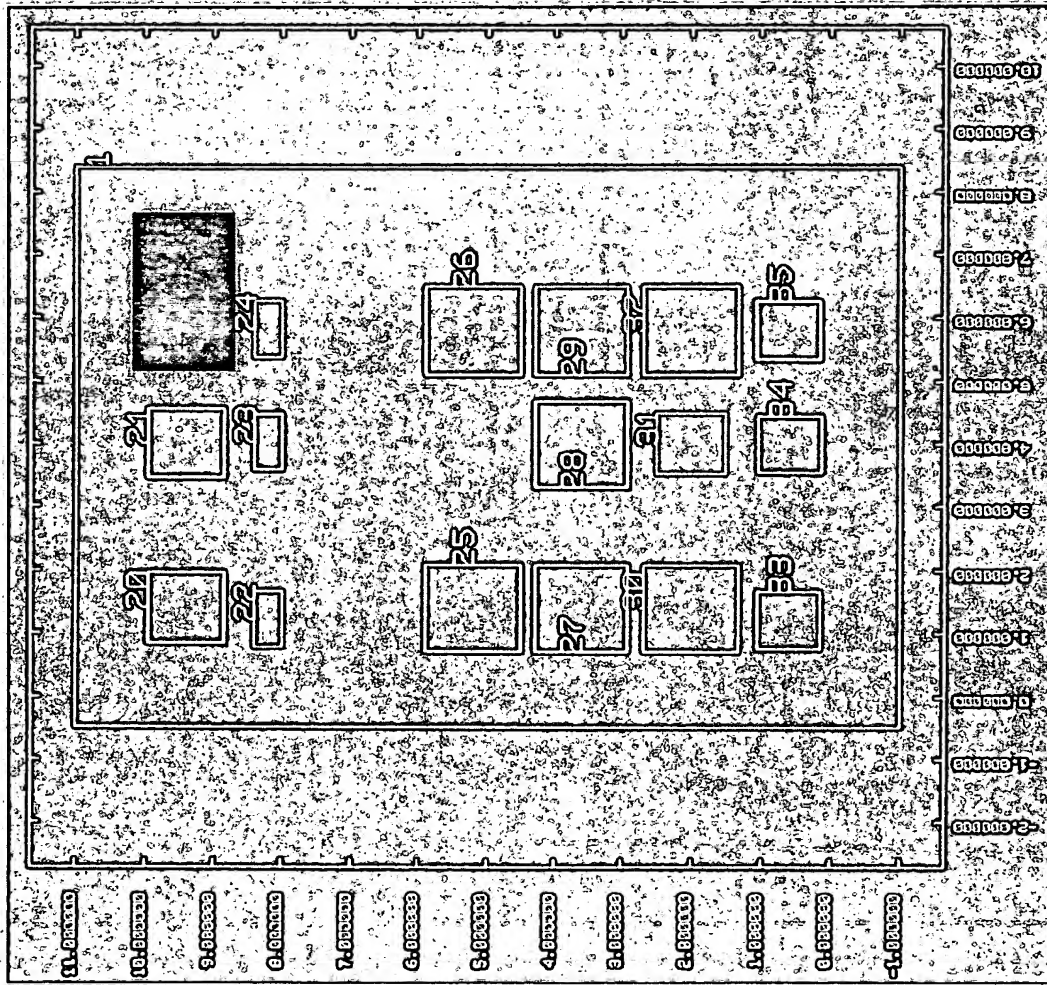
202120" 415442001

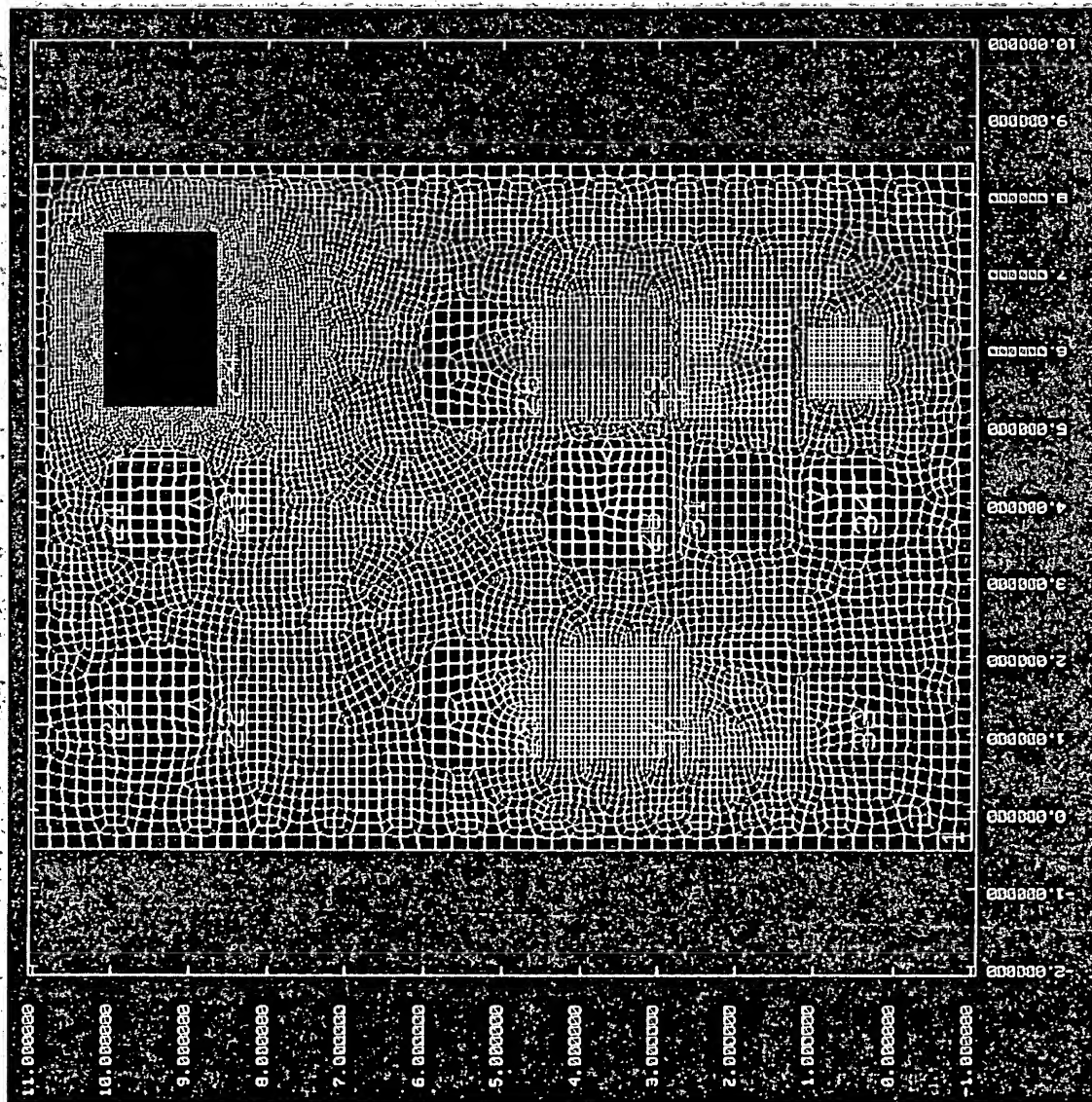
Title: Method, System and Computer Program Product for
Multidisciplinary Design Analysis of Structural Components
Investigator: Mostafa Rassaian
Applicant No: To be assigned
Atty Dkt No: 38190/235695

Durability Part Number Table					
Part Number	Package Name	Lead Style Name	Lead Material Name	Lead	Material Name
172308-00K	313 BGA Package	100mil pitch			
173332-00P	T11 TSOP-54 10x22mm	HYBRID 3002K			CU
173334-11J	Pqfp 208 1e	HYBRID 024			CU
1735-00-00L	30U CER Package				
173446-00K	388 BGA Package				
280-10020-101	280-10020-101				
280-10025-101	280-10025-101				
280-10025-102	280-10025-102				
280-10025-103	280-10025-103				
280-10025-104	280-10025-104				
280-10025-105	280-10025-105				

Material Table									
Name	Exp. Coef	Density	Heat Capacity	Poisson	Shear Mod	Therm Cond	Strength	Young Mod	
63SN37PB	0.21	400	8378.00	0.370	31280	51.000	3880.000	5.600	
ABLEBOND8360	45.000	3400.00	1000.000	0.350	300.000	2.900	2000.000	10.722	
AL	21.600	2712.00	920.000	0.330	7.600	161.000	38000.000	10.600	
ALBEMET	13.900	2100.00	1926.000	0.140	11.400	296.000	55000.000	26.000	
ALB POLY	13.980	1806.00	1574.000	0.210	6.920	164.580	32280.000	6.500	
ALHONEY	21.600	500.00	920.000	0.330	2.440	29.000	38000.000	6.300	
ALUMINA	7.100	3847.00	960.000	0.220	25.600	27.600	28450.000	40.000	
AU	14.200	19400.00	127.000	0.420	3.980	315.000	14900.000	11.310	
AUSN	15.900	14510.00	163.000	0.300	3.700	57.000	40000.000	8.600	
BRAZE	21.600	244.00	970.000	0.330	20.000	14.500	10000.000	5.300	
BT LAMINATE	15.000	1439.00	1135.000	0.300	1.330	0.310	3880.000	2.460	
CER-A	16.000	3847.00	960.000	0.220	16.390	27.600	28450.000	40.000	
CER-B	9.000	2800.00	800.000	0.300	16.390	0.900	28450.000	40.000	
CER-C	11.000	2800.00	800.000	0.300	16.390	0.900	28450.000	40.000	
CER-D	6.500	3847.00	960.000	0.220	25.600	27.600	28450.000	40.000	
CER-E	6.000	3847.00	960.000	0.220	16.390	27.600	28450.000	40.000	
CER-F	9.000	2800.00	800.000	0.300	16.390	0.900	28450.000	40.000	
CER-G	31.000	2800.00	800.000	0.300	16.390	0.900	28450.000	40.000	
CER-H	6.500	3847.00	960.000	0.220	25.600	27.600	28450.000	40.000	

FIG. 7.

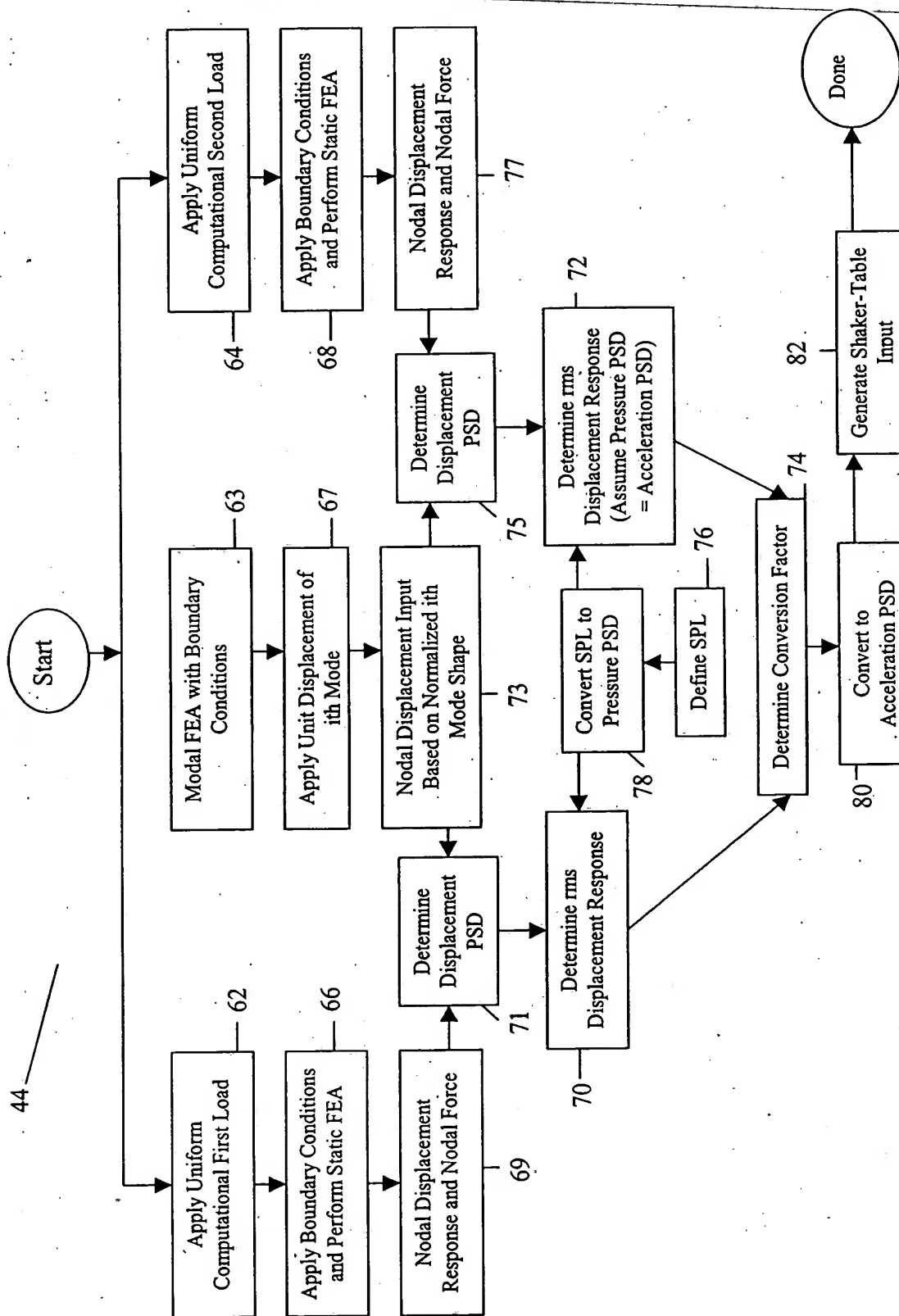




உள்ளே

[Faint, illegible handwritten notes or bleed-through from the reverse side of the page.]

FIG. 10.



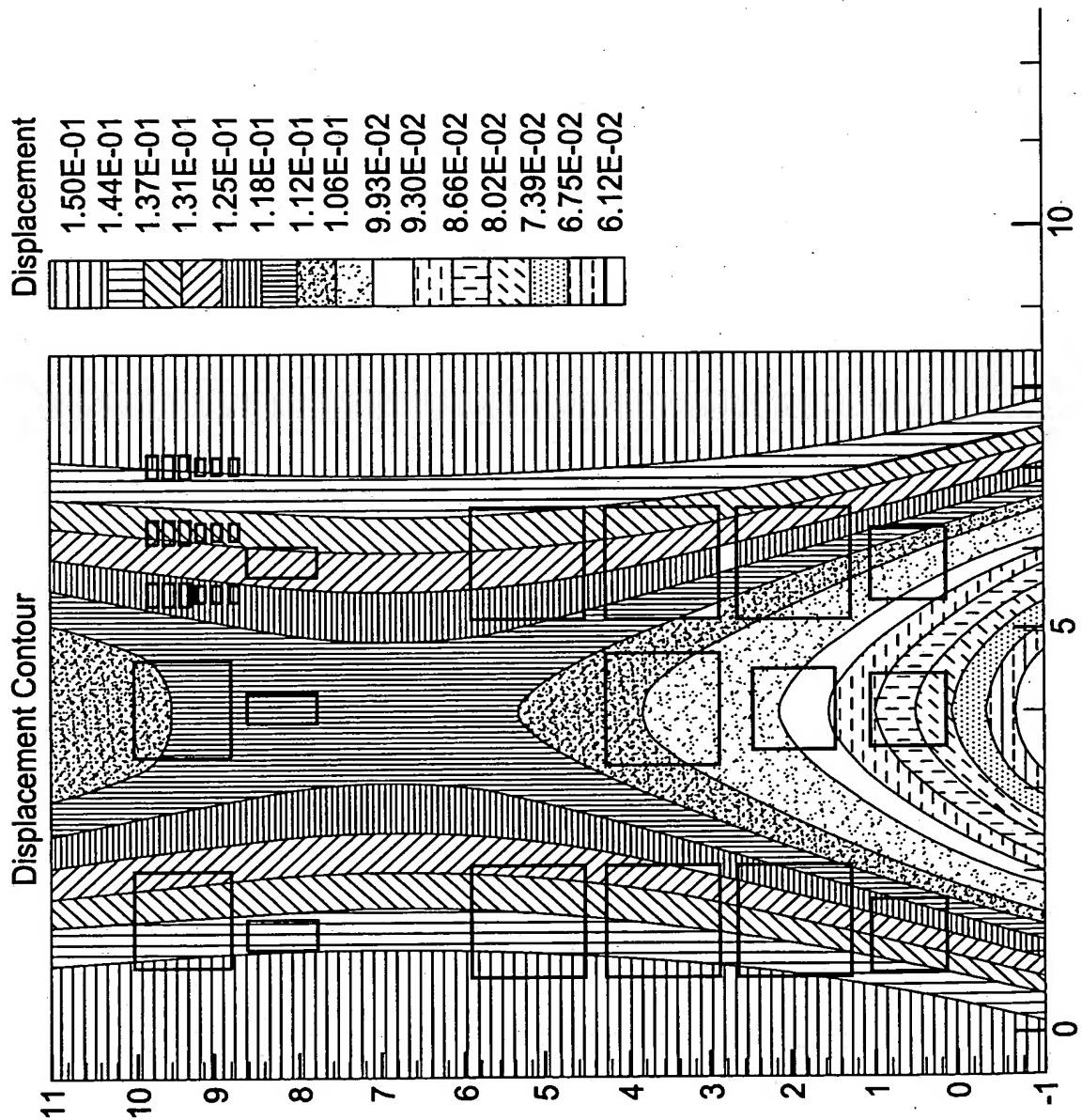
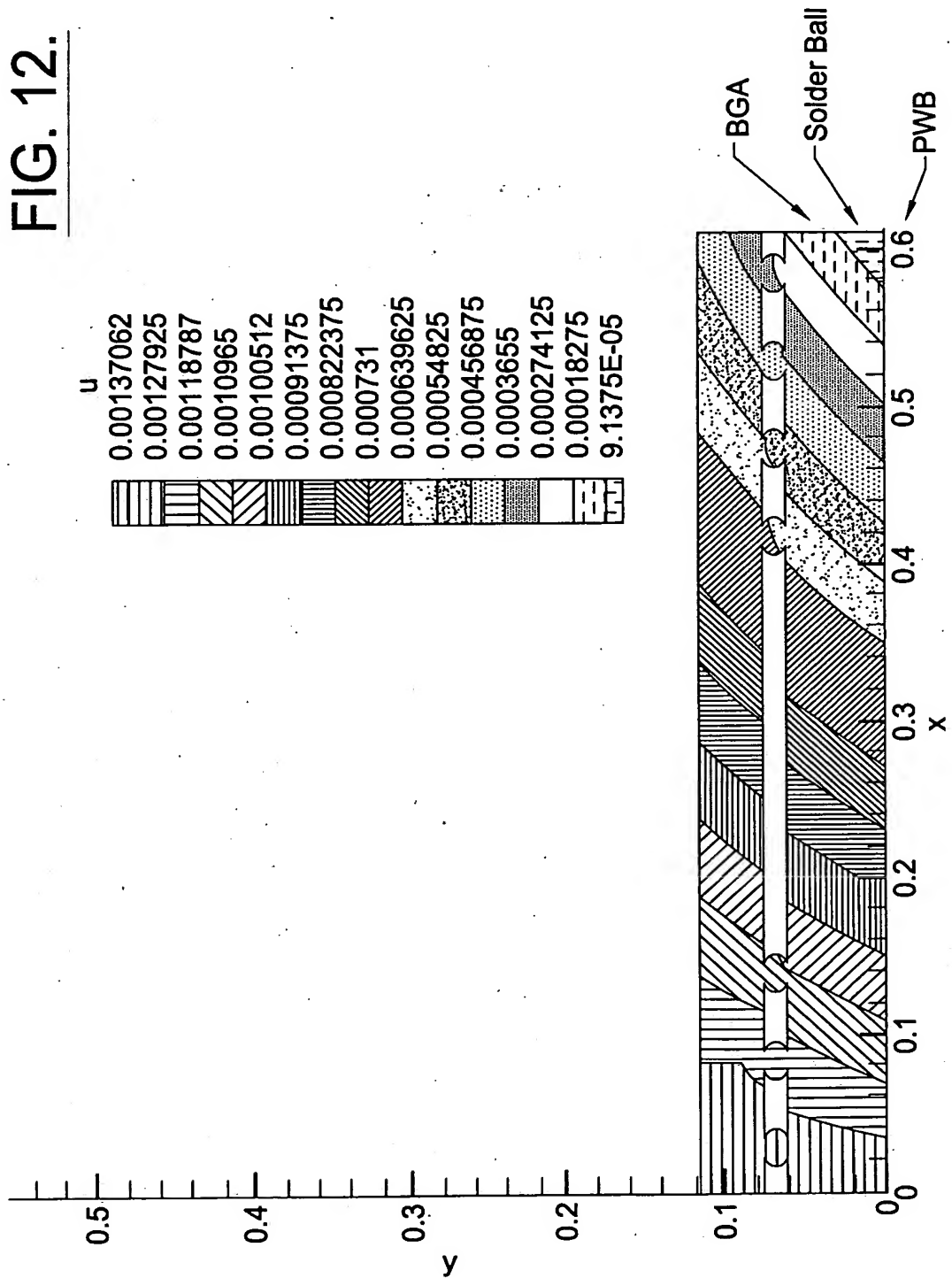


FIG. 11.

2024-03-14 16:44:00

FIG. 12.



202120-41542001

Title: Method, System and Computer Program Product for
Multidisciplinary Design Analysis of Structural Components
Author(s): Mostafa Rassaian
Application No: To be assigned
Atty Dkt No: 38190/235695

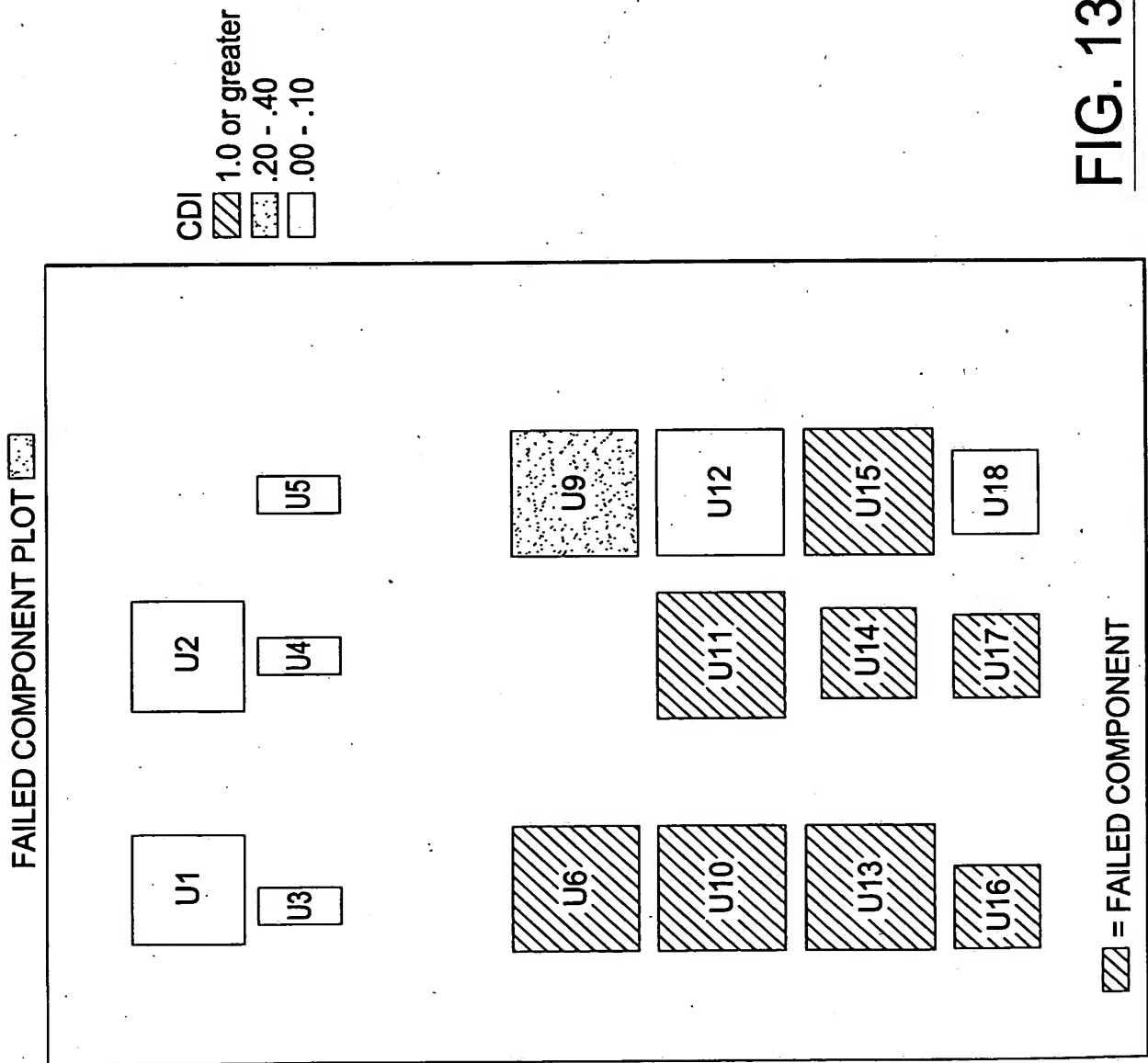


FIG. 13.